

Educational Topic

Avionics Technician

Related Job Titles:

Aircraft Electronics Specialist, Aircraft Electronics Technician, Aircraft Electronic Systems Specialist

Job Description:

Today's aircraft use sophisticated electronic equipment for communication, navigation, weather radar, flight control, hydraulics and autopilot systems that are known as "avionics." An Avionics Technician deals with the installation, calibration and repair of these electronic systems used on aircraft. Aircraft Electronics Specialists and Avionics Technicians work closely with the Maintenance Technicians to keep all aircraft systems operational. This work can take place in an aircraft or in a repair station. The duties include routine electronic maintenance (wiring), troubleshooting or localizing and diagnosing causes of equipment malfunction, replacement of faulty components, tracing circuitry, and aligning and adjusting repaired equipment. The Avionics Technician must also be organized, as they are required to note on forms what was wrong and how it was repaired.

Interests / Abilities:

- It is easy for you to figure out instructions for putting something together?
- It is easy for you to understand symbols and what they represent or mean?
- Do you like working with your hands to fix electrical appliances that are broken?
- Do you enjoy the challenge of figuring out how things work?
- Is it easy for you to follow step-by-step instructions?
- Are you able to do detailed work with your hands?
- Are you good at diagnosing and solving problems?

Education / Training Needed:

For this position, a 2-year course in Electronics or Avionics Training at a community or technical college, plus FCC (Federal Communications Commission) license and A & P (Airframe and Powerplant) Certification.

Suggested School Subjects / Courses:

- Algebra
- Scientific measurements
- Basic electronics
- Basic appliance repair
- Physics (electricity)
- Electrical engineering
- Basic avionics maintenance

Areas of expertise:

- *Thorough knowledge of electricity*
- *Electronics from small appliances to radios to cockpit systems*
- *Electronic diagram reading*
- *FCC license*
- *A & P certification (Airframe and Powerplant)*

Additional Resources:

- Earth to Orbit: Engineering Design Challenges
<http://eto.nasa.gov/>
- Graduate Student Researchers Program
<http://spacelink.nasa.gov/Instructional.Materials/NASA.Educational.Products/Graduate.Student.Researchers.Program.Brochure/.index.html>
- Institute of Electrical and Electronics Engineers
<http://www.ieee.org/>
- Junior Engineering Technical Society
<http://www.jets.org/>
- Lansing Community College Avionics Technology Program
<http://www.lcc.edu/avionic>
- MATHCOUNTS Competition
<http://mathcounts.org/>
- Minority University Research and Education Programs
<http://mured.nasaprs.com/>
- NASA Cooperative Education Program for college students
<http://spacelink.nasa.gov/Educational.Services/NASA.Education.Programs/Student.Support/NASA.Cooperative.Education.Program/.index.html>
- NASA Jobs
<http://nasajobs.nasa.gov/>
- NASA SHARP Internship Program for high-schoolers
<http://www.mtsibase.com/sharp/>
- NASA Student Employment
http://nasajobs.nasa.gov/stud_opps/employment/index.htm

What can I do right now?

- Become a Ham radio operator.
- Take an electronics course.
- Learn how to repair small electrical appliances.
- Take courses that help you to be comfortable using a computer.
- Get experience working the soundboard for your school plays or musical performances.

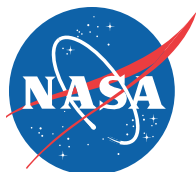
- NASA Student Involvement Program student contests
<http://www.nsip.net/index.cfm>
- Revolutionary Vehicle Concepts and Systems student competition
<http://avst.larc.nasa.gov/competitions.html>
- Robotics Education
<http://robotics.arc.nasa.gov/>
- San Jose State University Mechanical and Aerospace Engineering
<http://www.engr.sjsu.edu/mae>
- Tech-Interns.com
<http://www.tech-interns.com/>

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Thank you.



<http://quest.nasa.gov/people/index.html>

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